MODELING, SIMULATION AND ANALYTICALLY BASED WARFARE ANALYSES

Bidders Conference

N00039-02-R-0024

Presented by

Mr. Gregory K. Melcher

OUTLINE

- Statement of Work
- PPBS Process
- Focused Issues
- N81 Roles and Missions
- Analytical Agenda/Campaign Analysis
- Support to OPNAV, Primarily N6/N7 Functions

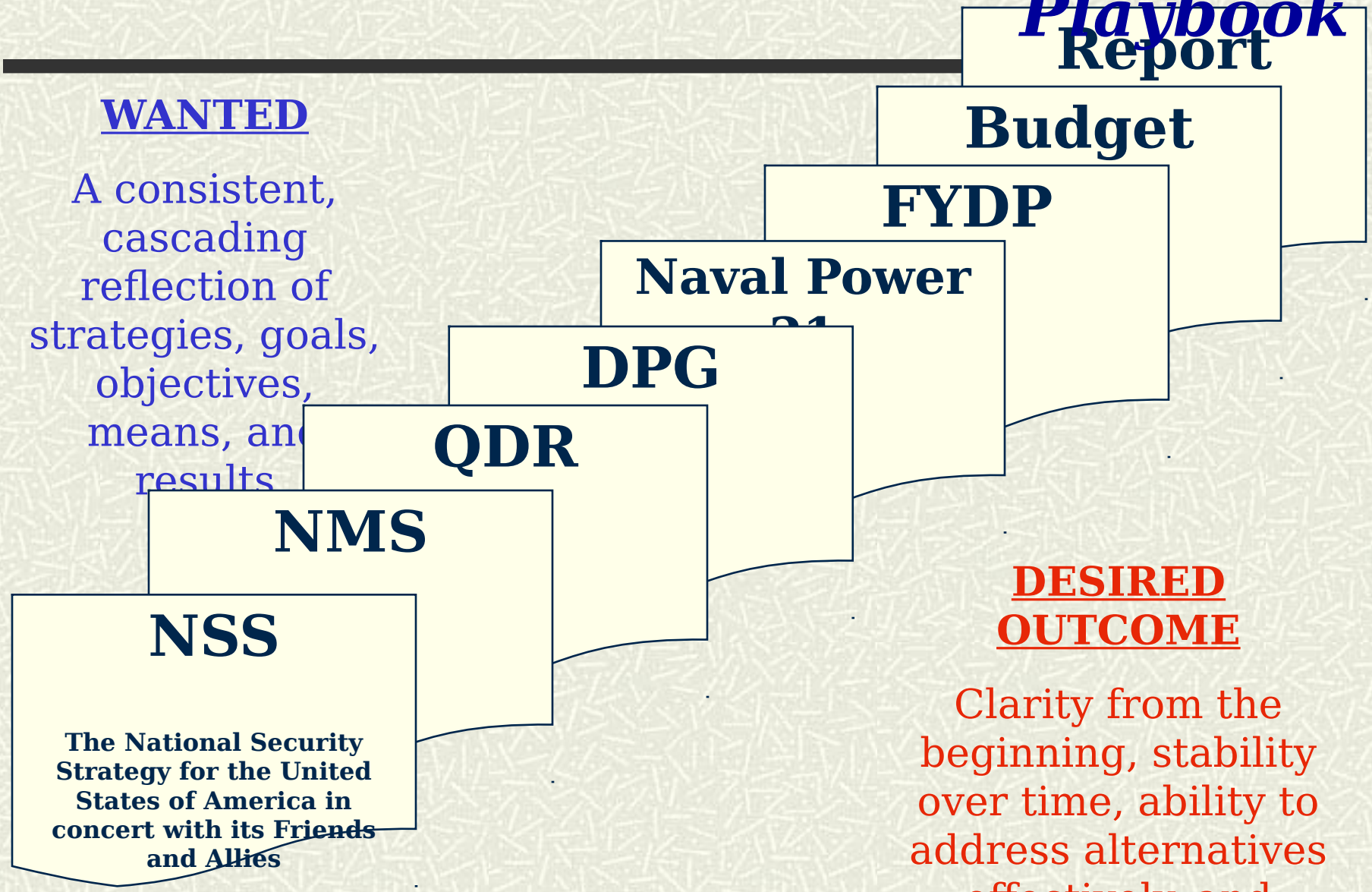
Statement of Work (SOW)

The SOW covers the modeling and simulation and analytically based warfare analyses that provide the basis for decision making with respect to alternative weapons systems; Concepts of Operations (CONOPS) and force packages, Command, Control, Communications, Intelligence, Surveillance and Reconnaissance (C4ISR) systems (FORCENet); warfare systems (Sea Strike, Sea Shield, and Sea Basing); force structure; and support systems (Sea Trial, Sea Warrior, and Sea Enterprise).

DoN Playbook

WANTED

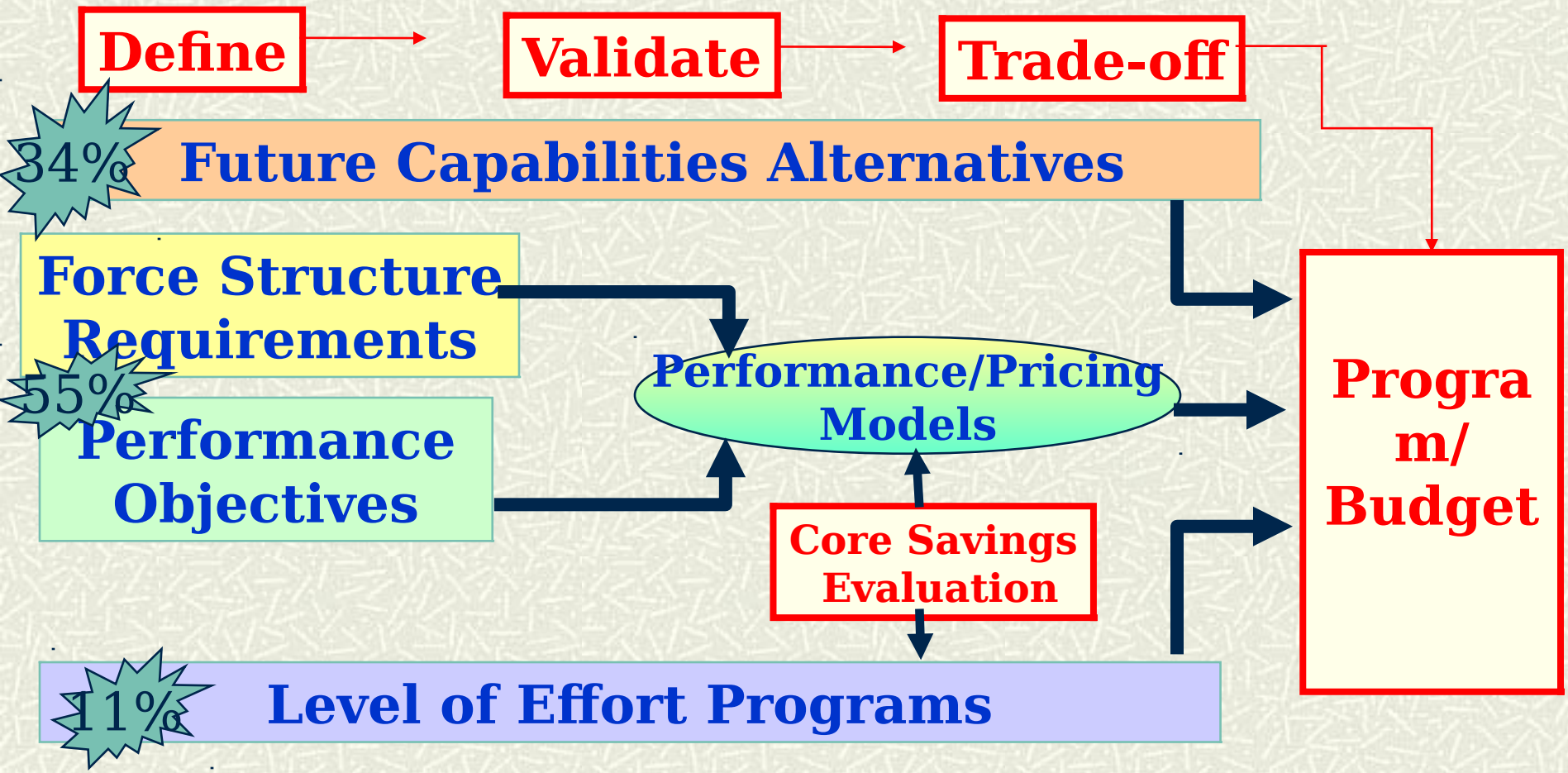
A consistent, cascading reflection of strategies, goals, objectives, means, and results



DESIRED OUTCOME

Clarity from the beginning, stability over time, ability to address alternatives effectively, and evaluate results achieved

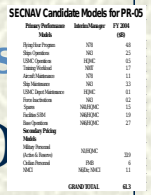
The Way Ahead...
A New Approach



FMB World View

(PB04 $Billions)

Performance/ Pricing Models ($61.3)	Future Mission Capability ($40.9)	Level Of Effort (LOE) ($12.5)



SECNAV Candidate Models for PR-05

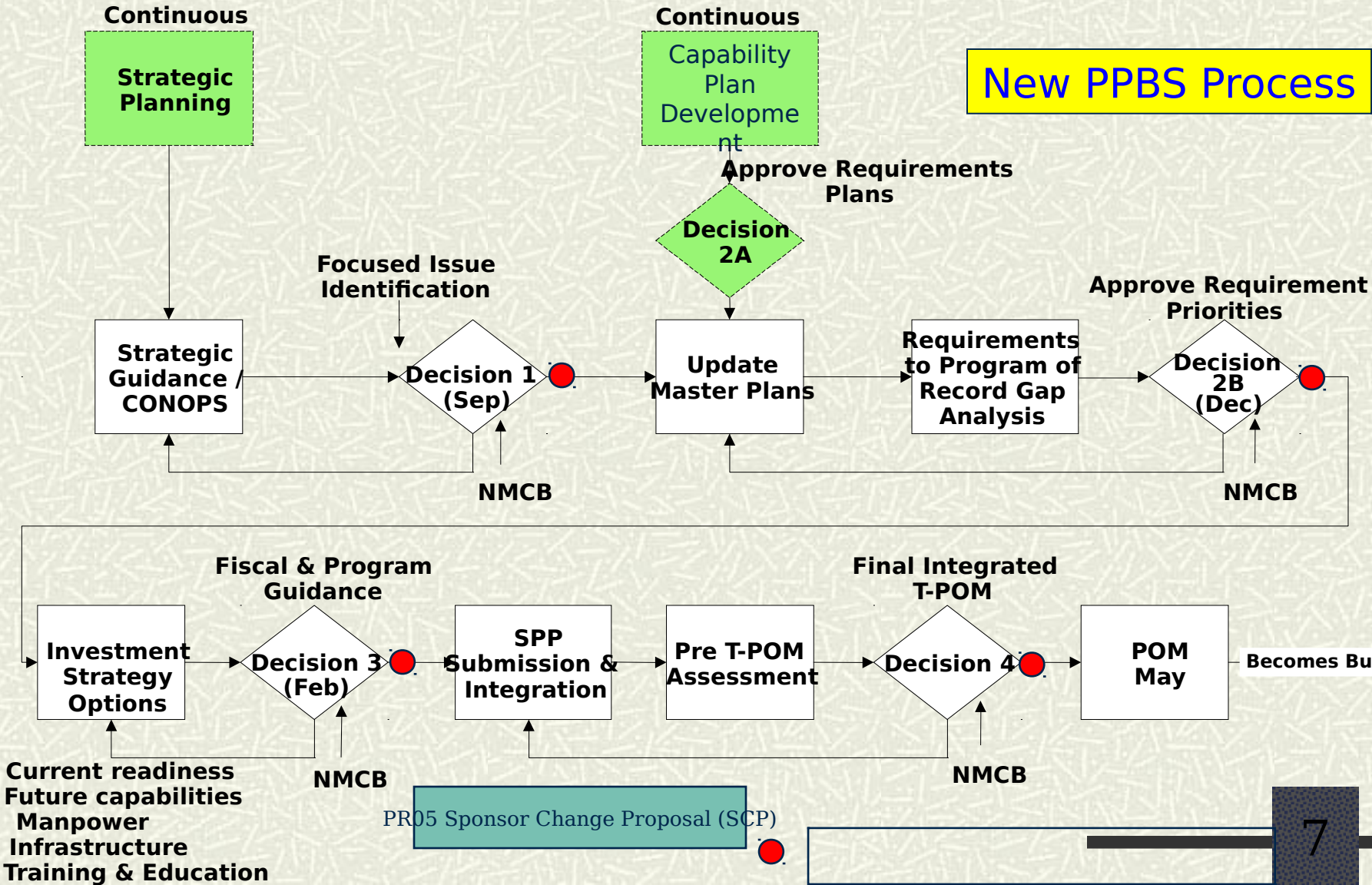
Primary Performance Models	Interim Manager	FY 2004 ($B)
Flying Hour Program	NTR	4.0
Ships Operations	NAS	2.5
USMC Operations	HQMC	0.5
Training/Workload	NAVY	1.7
Aircraft Maintenance	NTR	1.1
Ship Maintenance	NAS	1.3
USMC Depot Maintenance	HQMC	0.1
Force Inactivations	NAS	0.2
Spares	NAVAIR/MC	1.5
Facilities SRM	NAVAIR/MC	1.9
Base Operations	NAVAIR/MC	2.7
Secondary Pricing Models		
Military Personnel	NAVMC	33.9
(Active & Reserve)	FMB	6
Civilian Personnel	NAVAir, NMCI	1.1
NMCI		
GRAND TOTAL		61.3

Land Of Effort Program Composition

Program	FY2004 ($)
Administration	590
Other Aviation Equipment	542
BRAC	31
Construction	76
Depot Support	650
Environmental	140
Ships Hosted Ops	702
Maintenance	1,632
Missile Support	467
NIDAF	237
NMCP	174
Ops Support	870
NMCI/Cash	1,468
PCS	600
S&T	1,041
Security	644
Stores	1,021
Sys-Wide Support Total	1,742
Weapons Support	1,742
Grand Total	12,513

MILPERS ($34.9)	O&M ($33)	Procurement ($30)	RDTE ($14)	OTHER ($2.8)

SECNAV Way Ahead…
Integrated Requirements and Resources Management Process (IRRMP) Initiative



Implementing Change in Focused Issues

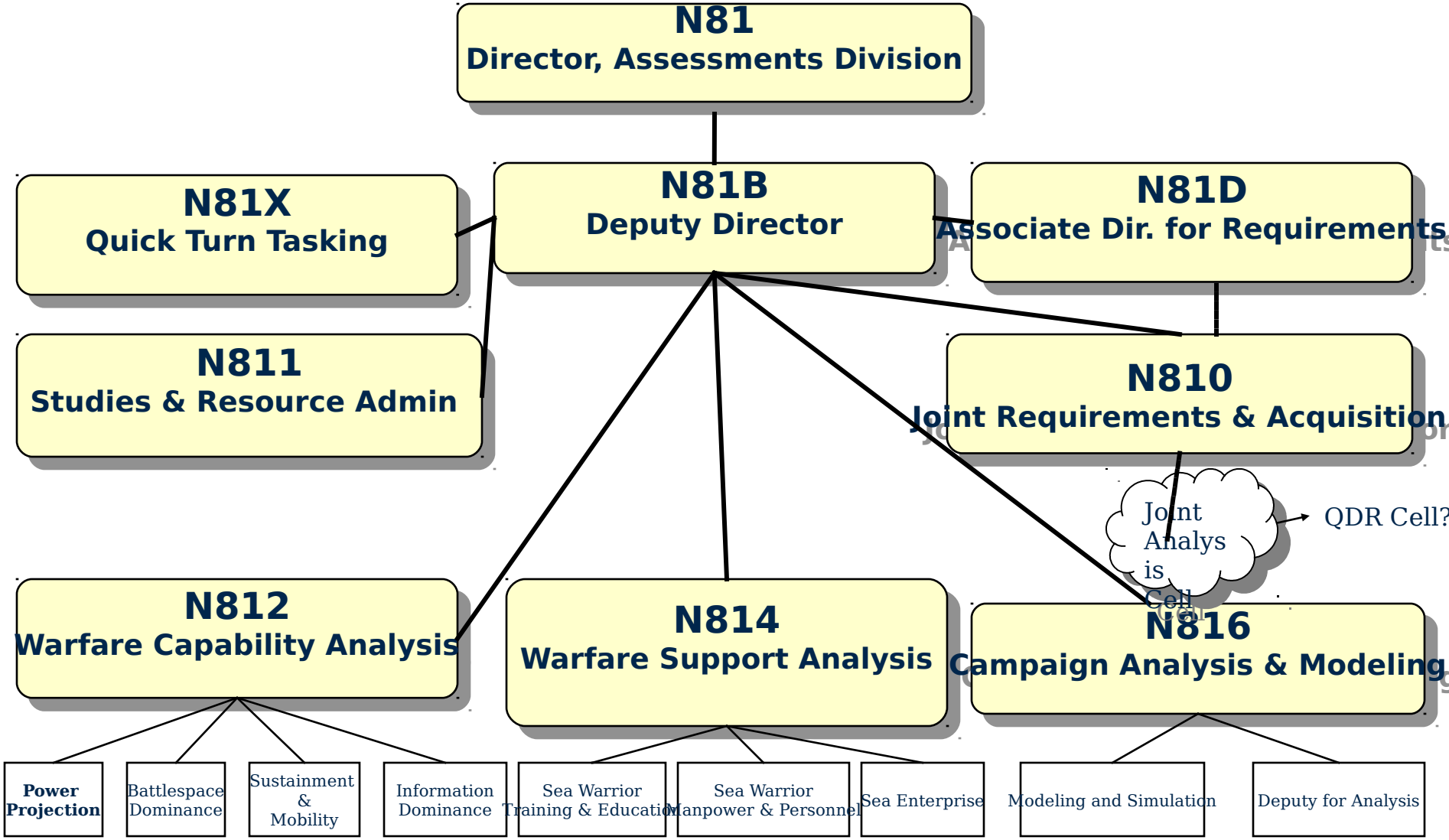
- Issues identified in gap analysis
- Issues not resolved in prior year's PR/POM
- Issues that arise from Capability Plan development
- Emergent Requirements
- DPG/PDM study anticipation or follow-on
- Issues from USMC

Board of Director/Navy-Marine Corps Board Appro

PDM/DPG STUDIES

- PDM Study Topic (6 Navy Lead)
  Example: Joint Forcible Entry Operations
  N81/USMC (MCCDC) leads
- PDM Study Topic (13 Navy Interest)
  Example: Joint Forcible Entry Operations
  J8 Lead
- DPG-04 Study Topics
  Example: Operational Availability
  J8 Lead

N81 Organization Chart



N81 Key Functions

- External Influence and Guidance
  - Lead JROC/JRB/JRP participation
  - Coordinate/lead DPG, POM, JWCA, & QDR studies
  - Promote & defend Navy POM (with N80)
- Analyses of Capability Sponsors' Products
  - Independent assessment
  - Proactively participate in Capability Sponsors' IPTs
  - Present opposing points of view (analytically based)
- Big Picture/Independent Analyses
  - Cross Cutting Analysis across N1, N2, N4, N6/N7, N00T
  - Details not covered or missed by Capability Sponsors
- Black hat/Quick turn tasking from senior leadership

N81 Additional Functions

- Provide campaign analysis support for OPNAV
  - Broker agreed assumptions, CONOPS, data
  - Campaign baseline becomes staring point for all other study excursions
- Identify & manage valid data & models for studies
  - Ensure quality control, authoritative data, access
  - OPNAV in PR05; Navy in POM06
- Coordinate V&V of performance/pricing models and accredit them
- Provide overarching PPBS analyses and guidance (w/80)
  - GAP analysis & Investment Strategy (TOA allocation)
- Pre-brief senior leadership prior to Executive Decision forums

OSD's Analytic Agenda

- A Department-wide initiative aimed at making major joint analysis efforts more effective
  - Integrate and manage analysis requirements
  - Time analysis outputs to support decision milestones
  - Improve data, and make it more available
  - Accelerate the deliberate planning process from 2 years to 1 year
  - Improve tools and processes
  - Fund analytic requirements

OSD Demands

- Move toward capability-based analysis: vary range of threat, other assumptions
- Improve the quality of Joint analyses
  - Data: validated, documented, accessible
  - Tools: support quick turn and in-depth analysis
  - Assumptions: credible, agreed, visible
  - CONOPs: reflect Joint operations

OSD "Analytic Agenda" requires:

1. Data for 4 scenarios (near and mid-term)

2. Ability to widely vary assumptions and capabilities

3. Nimble, flexible models

N816 Mission
Dual Chains of Command

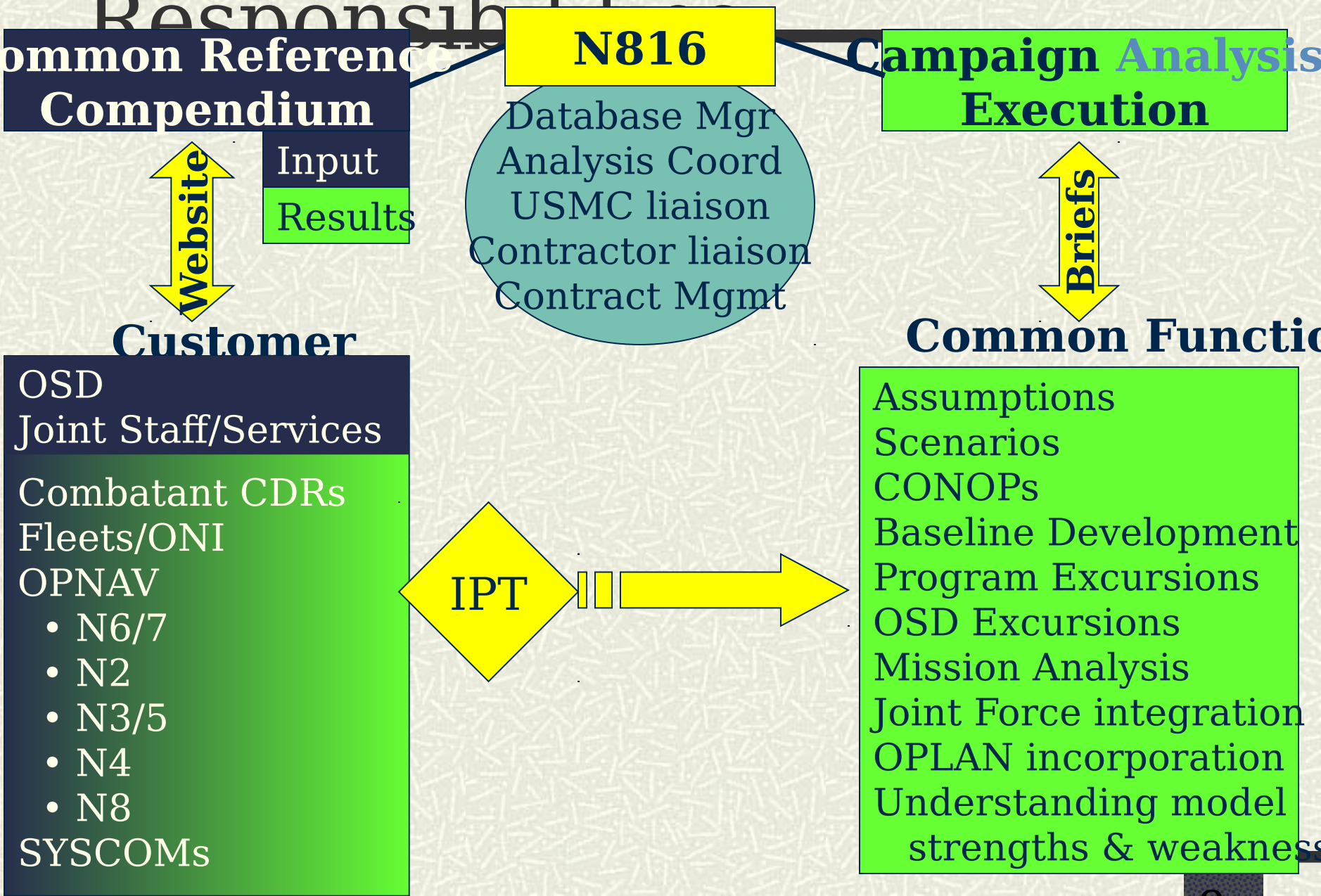
- CNO via DNS
  - Manage campaign level analysis for OPNAV
    - Act as liaison with USMC and external organizations
  - Execute and/or facilitate mission-level and campaign excursions
  - Provide improved, authoritative data
    - Internal and external to DoN
  - Manage Navy role in OSD “analytic agenda”
    - Website maintenance and access control
- N81
  - Support for warfare assessment
  - Ad hoc, quick-turn tasking on macro, cross-cutting issues

N816 Responsibilities

- Broker, adjudicate, ensure quality control, and document:
  - Study Plan
    - Scenario baseline and excursions (scope)
    - Assumptions
    - Data
    - Measures of Performance/Effectiveness (MOPs/MOEs)
- Translate Fleet, Resource Sponsor inputs into projected CONOPs, coordinate across OPNAV
  - Interactively with Blue side, ONI input on Red CONOPs
- Direct model execution, analyze results
  - Develop tasks and manage contractor effort
  - Quality control, ensure commonality
  - Assist OPNAV in analyzing/understanding results

Generates baseline from which mission-level problems are explored

Scope and Responsibilities



Campaign Schedule Constraints

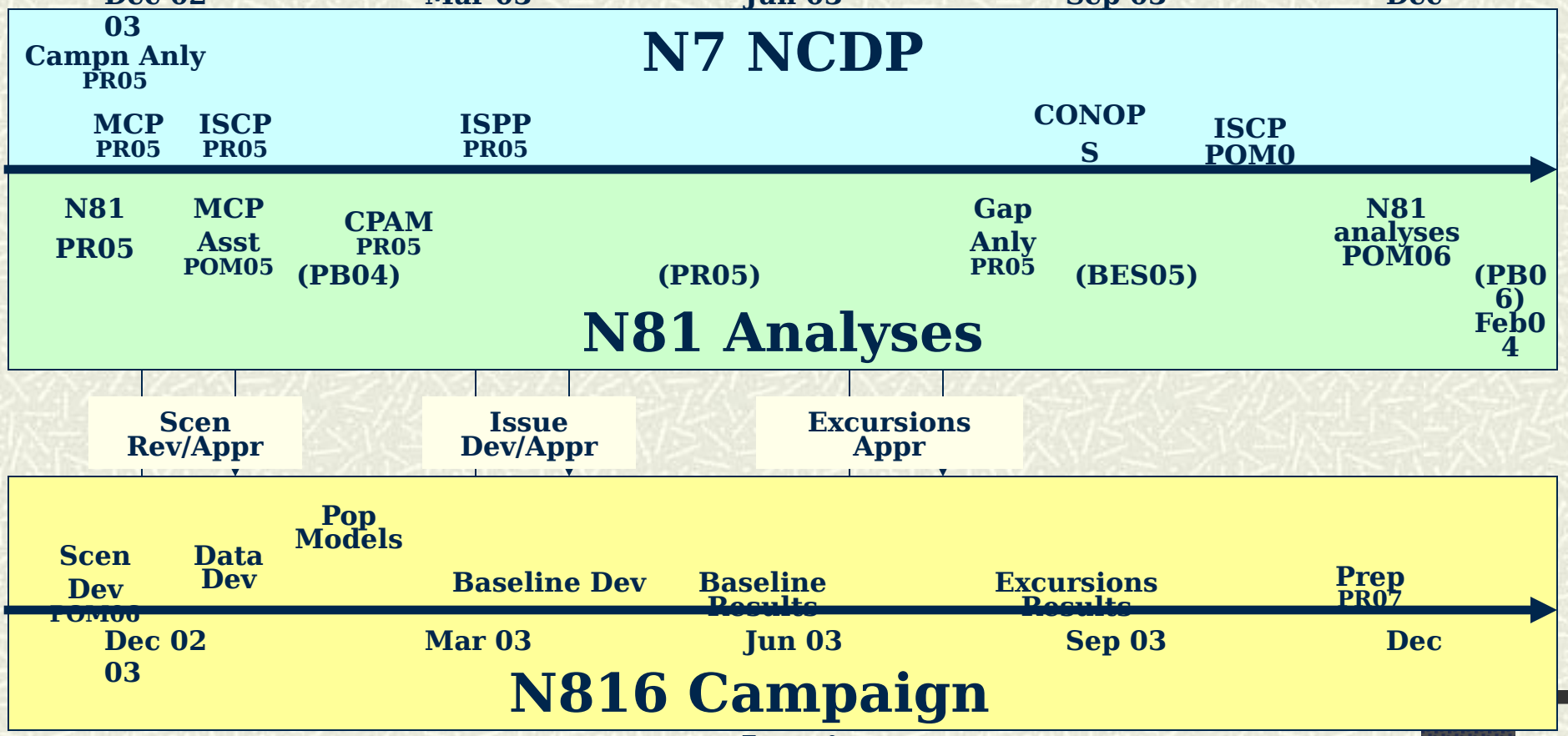
OSD-directed Priorities
Capability-based analysis
Parametric variations
Jan 03

Joint Staff
Future Joint CONOPs
Spring 03?

Combatant CDR
OPLAN revision
Plan: Dec 02
Details: May 03

Intel, Service data updates
May 03?

***Timing* is an issue**
- Delivery of resu
- Relevance in lig
of changes



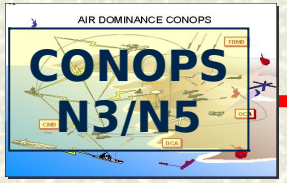
N6/N7 Key Functions

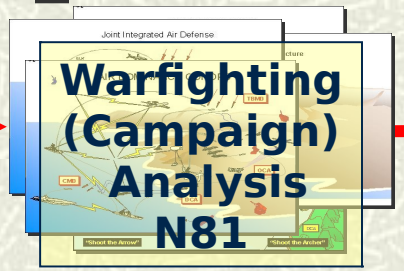
- **Align, organize, integrate, transform around Seapower 21**
  - Treat the 4 warfighting concepts of Seapower 21
    as core Naval capabilities
  - Integrate SYSCOM Commanders for assessing overlap, interoperability, technical risk/schedule/phasing, and cost
  - Align ONR contribution
  - Establish and maintain process business rules through N70

SeaPower 21 Alignment – N6/N7

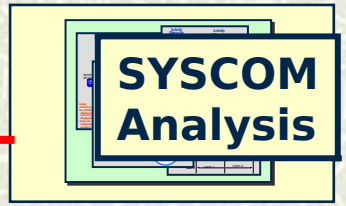
Naval Capability	Warfare Sponsor		
Sea Shield	**N701** **N76, co-chairs N77 & USMC AVN**	**NAVSEA**	**Ocean, Atmospher & Space Dept.**
Sea Strike	**N702** **N78, co-chairs N77 & USMC AVN**	**NAVAIR**	**Naval Expeditionar Warfare & Strike Tech. Dept.**
Sea Basing	**N703** **N75, co-chairs N76, N42, & USMC EFDC**	**NAVSEA**	**Engineering, Materi & Physical Sciences Dept.**
FORCEnet	**N704** **N61, co-chairs N2 & USMC EFDC**	**SPAWAR**	**Information, Electronics & Surveillance Dept.**

Naval Capability Development Process

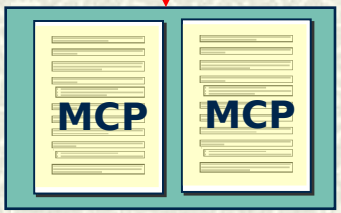


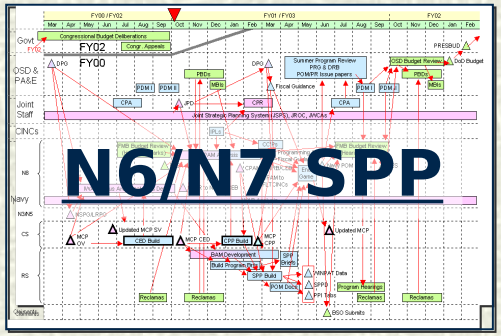


Force Capability Reqmts N6/N7



Mission Area Analysis



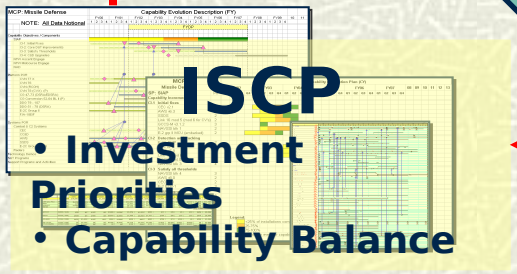


Capability Prioritization

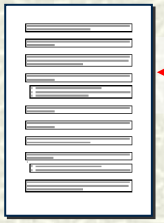
S & T Assessment

NCP

Transformation Roadmap



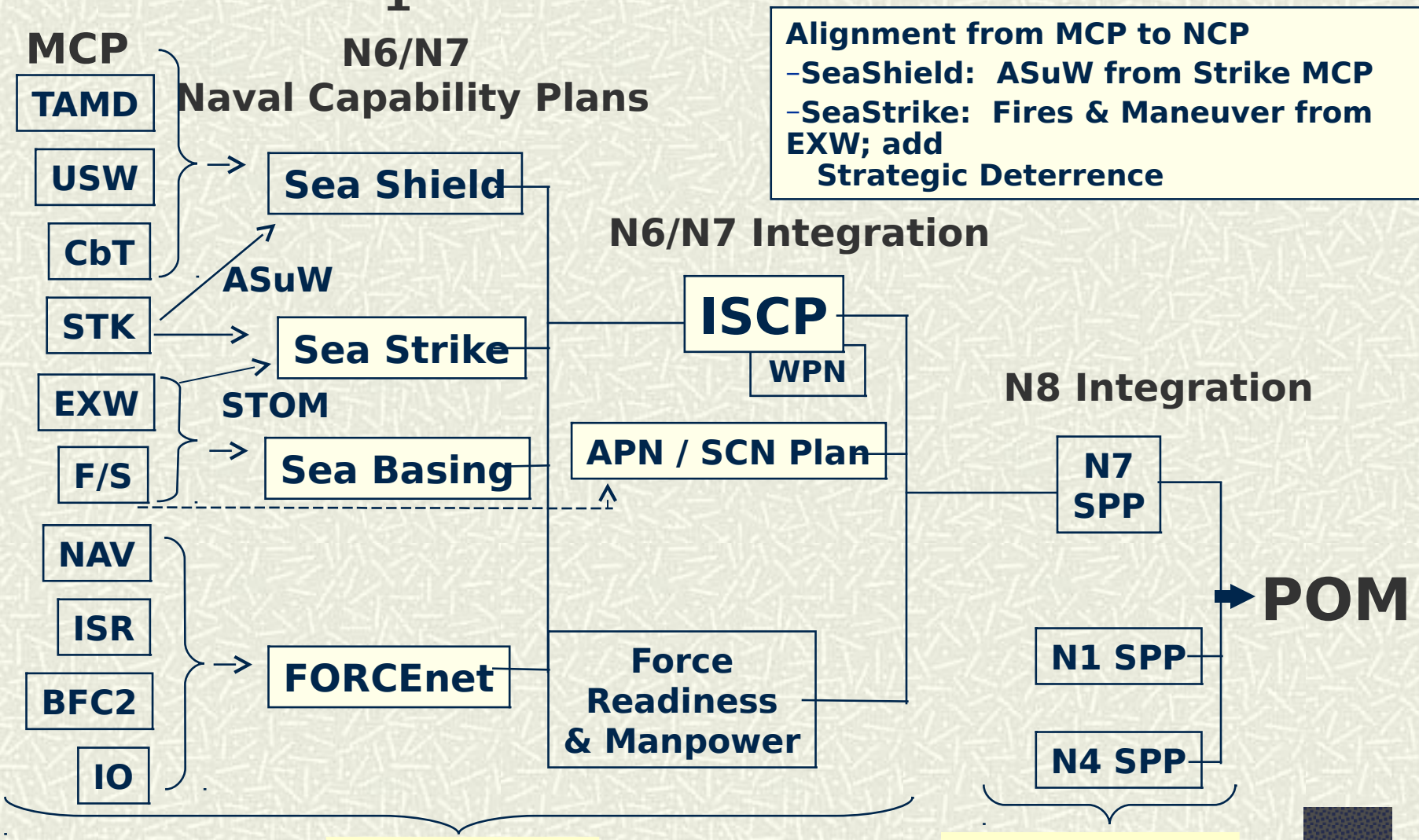
Program Guidance



APN / SCN Readiness / Manpower

Force Structure & Munitions Analysis

NCDP Process Sequence



Alignment from MCP to NCP

- **SeaShield: ASuW from Strike MCP**
- **SeaStrike: Fires & Maneuver from EXW; add Strategic Deterrence**

This slide is UNCLASSIFIED

BACKUP

- Performance Models POCs
- Level of Effort
- Analytic Process
- Index of Abbreviation and Acronyms
- SPAWAR's Contracting Point of Contact

Performance/Pricing Models

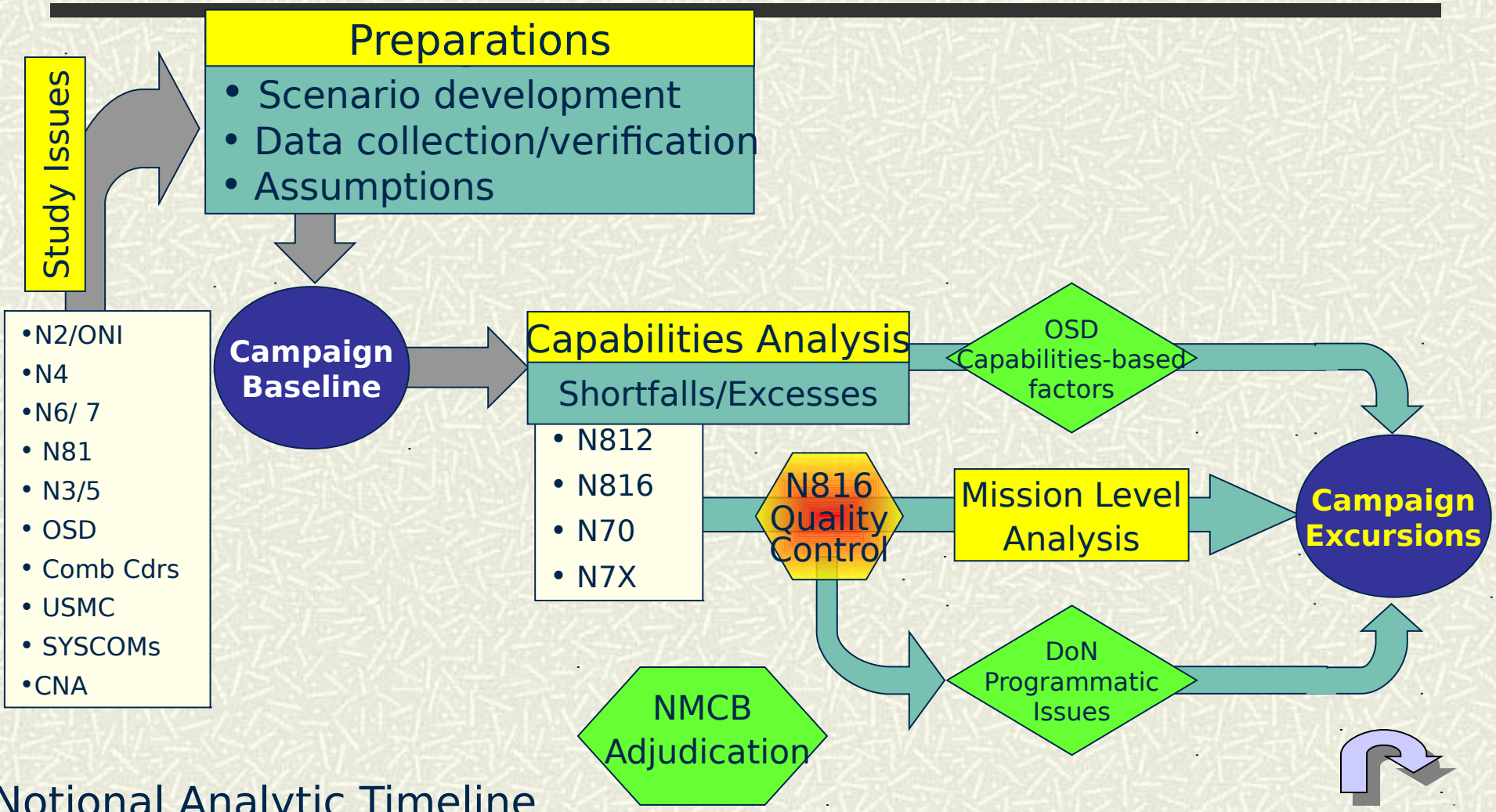
SECNAV Candidate Models for PR-05

Primary Performance/ Pricing Models	Interim Manager	FY 2004 ($B)
Flying Hour Program	N78	4.8
Ships Operations	N43	2.5
USMC Operations	HQMC	0.5
Training Workload	N00T	1.7
Aircraft Maintenance	N78	1.1
Ship Maintenance	N43	3.3
USMC Depot Maintenance	HQMC	0.1
Force Inactivations	N43	0.2
Spares	N41/HQMC	1.5
Facilities SRM	N46/HQMC	1.9
Base Operations	N46/HQMC	2.7
Secondary Pricing Models		
Military Personnel (Active & Reserve)	N1/HQMC	33.9
Civilian Personnel	FMB	6
NMCI	N6/Dir, NMCI	1.1
	GRAND TOTAL	**61.3**

Level Of Effort

Level Of Effort Program Compositon	
Program	**FY2004 $M**
Adminstration	784
Other Aviation Equipment	542
BRAC	7
Construction	74
Depot Support	829
Environmental	145
Fam Housing Ops	783
Maintenance	502
Missile Support	867
NDSF	327
NWCF	130
Ops Support	673
NWCF Cash	-448
PCS	889
S&T	1644
Security	608
Surge	583
Svc-Wide Support Total	1760
Warfare Support	1413
Grand Total	12,521

Analytic Process



Notional Analytic Timeline

Index of Abbreviations and Acronyms
(Excel Spreadsheet)

APN	Aircraft Procurement, Navy
ASUW	Anti-Surface (Warfare)
ASW	Anti-Submarine Warfare
AT/FP	Anti-Terrorism/Force Protection
AVN	Aviation, Navy
BAM	Baseline Assessment Memorandum
BCAPP	Battleforce Capability Assessment and Programming Process
BES	Budget Estimate Submission
BFC	Battle Force Commander
BOD	Board of Directors
BRAC	Base Realignment and Closure
C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance
CDRs	Commanders
CED	Capability Evolution Description
CFFC	Combined Fleet Forces Command
CLF	Combat Logistics Force
CNA	Center for Naval Analyses
CNETC	Chief of Naval Education & Training Center
CNO	Chief of Naval Operations
CNP	Chief of Naval Personnel
CONOPS	Concept of Operations
CPAM	CNO's Program Assessment memorandum
DASD	Deputy Assistant Secretary of Defense
DNS	Director, Navy Staff
DON	Department of the Navy
DPG	Defense Planning Guidance
EXWAR	Expeditionary Warfare
FMB	(Office of) Financial Management and Budget
FNCs	Future Naval Capabilities
FYDP	Future Years Defense Program

Index of Abbreviations and Acronyms
(Excel Spreadsheet)

IPTs	Integrated Process Teams
IRRMP	Integrated Requirements and Resource Management Process
ISCP	Integrated Strategic Capability Plan
ISPP	Integrated Sponsor Program Proposal
ISR	Investment Strategy Review
ISR	Intelligence-Surveillance-Reconnaissance
IWARS	Integrated Warfare Architectures
JFCOM	Joint Force Command
JRB	JROC Review Board
JROC	Joint Requirements Oversight Committee
JRP	Joint Requirement Process
JWCA	Joint Warfighting Capabilities Assessment
LOE	Level of Effort
MCCDC	Marine Corps Combat Development Command
MCM	Mine Counter Measures
MCO	Mission Capability Operations
MCP	Mission Capability Package
MILPERS	Military Personnel
MOEs	Measures of Effectiveness
MOPs	Measure of Performances
MTW	Major Theater Wars
NAVAIR	Naval Air systems command
NAVCOMPT	Navy Comptroller
NAVSEA	Naval Sea Systems Command
NCDP	Naval Capability Development Process
NCP	NavalCapabilities Process
NDSF	National Defense Sealift Fund
NMCB	Navy Marine Corps Board
NMS	National Military Strategy
NPS	Naval Postgraduate School

Index of Abbreviations and Acronyms
(Excel Spreadsheet)

NSS	Navy Strategic Study
NWCF	Navy Working Capital Fund
NWDC	Naval Warfare Development Command
OBOS	Other Base Operating Support
O&M	Operations & Maintenance
ONI	Office of Naval Intelligence
ONR	Office of Naval Research
OPLAN	Operation Plan
OPNAV	Office of the Chief of Naval Operations
OSD	Office of the Secretary of Defense
PCS	Permanent Change of Station
PDM	Program Decision Memorandum
POM	Program Objectives Memorandum
PPBS	Planning, Programming & Budgeting System
PRO5	Program Review - 05
QDR	Quadrennial Review
RDTE	Research, Development, Test & Evaluation
S&T	Science & Technology
SCN	Shipbuilding & Conversion, Navy
SCP	Sponsor Change Proposal
SECNAV	Secretary of the Navy
SPAWAR	Space and Naval Warfare Systems Command
SPP	Sponsor Program Proposal
SYSCOMs	Systems Command (AIR, SEA, SPAWAR,FAC, SUP)
TACAIR	Tactical Air Forces
TAMD	Theater Air Missile Defense
TOA	Total Obligational Authority
T-POM	Tentative Program Objectives Memorandum
TYCOM	Type Commander
UN	United Nations

SPAWAR's Contracting POC

- Ms. Cheryl Fisher – Contracting Specialist
  - Telephone Number: 858-537-0289
  - Email Address: Cheryl.Fisher@navy.mil
  - Fax Number: 619-524-7158
  - Address: SPAWARSYSCOM
    Atttn.: Cheryl Fisher, Code 02-22F
    Bldg OT4, Room 1029
    4301 Pacific Highway
    San Diego, CA 92110-3127